# P7H55-M PRO
## Visual Overdrive

- Intel LGA1156 Platform
- Intel® H55 Express Chipset
- ASUS GPU Boost
- ASUS TurboV and Turbo Key
- ASUS Express Gate

## CPU, Chipset and Graphics features

### LGA1156 Intel® Lynnfield/Clarkdale Processor Ready

This motherboard supports the latest Intel® Lynnfield and Clarkdale processors in LGA1156 package, which has memory and PCI Express controller integrated to support 2-channel (4 DIMMs) DDR3 memory and 16 PCI Express 2.0 lanes providing great graphics performance. Intel® Lynnfield and Clarkdale processors are the most powerful and energy efficient CPUs in the world. Moreover, Intel® Clarkdale integrated Graphics Processing Unit (GPU) processors which goes with Intel® H55 chipset with VGA out can bring you to the whole new experience of the next generation VGA performance. It also provides separated 3D, 2D and Video Engines to execute different graphic control in hardware.

### Intel H55

The Intel® H55 Express Chipset is the latest one-chipset design to support latest 1156 socket Intel® Core™ i7/ Core™ i5/Core™ i3/ Pentium® Processors. Intel® H55 chipset provides improved performance by utilizing serial point-to-point links, allowing increased bandwidth and stability. Using Intel Core™ i5 6 Series, Core™ i3 5 Series and Pentium® CPU with H55 Express Chipset to enjoy the latest Intel integrated graphic performance!

### PCIe 2.0

**Double Speed; Double Bandwidth**
This motherboard supports the latest PCIe 2.0 devices for double speed and bandwidth which enhances system performance.

## VGA Output Support

### HDMI Support

**Enjoy Full HD 1080p Multimedia Home-Theater Entertainment**
High-Definition Multimedia Interface (HDMI) is a set of digital video standards that delivers multi-channel audio and uncompressed digital video for full HD 1080p visuals through through a

### DVI Support

DVI (Digital Visual Interface) provides high visual quality of digital display devices such as LCD monitor. The interface of this motherboard supports dual VGA output both DVI-D/HDMI and RGB.

single cable. Supporting HDCP copy protection such as Blu-ray Discs, HDMI provides you with the highest-quality home theater experience.

### Dual-Channel DDR3 2133(O.C.) / 1333 / 1066 support

The motherboard supports DDR3 memory that features data transfer rates of 2133(O.C.) / 1333 / 1066 MHz to meet the higher bandwidth requirements of the latest 3D graphics, multimedia, and Internet applications. The dual-channel DDR3 architecture enlarges the bandwidth of your system memory to boost system performance.

DDR3 2133 (O.C.)

## ASUS Overclocking features

### GPU Boost

**Instant iGPU Level Up!**
GPU Boost overclocks the integrated GPU in real time for the best graphics performance. User-friendly UI facilitates flexible frequency and voltage adjustments. Its ability to deliver multiple overclocking profiles also provides rapid and stable system-level upgrades.

GPU Boost

### Turbo Key

**Touch-n-Boost!**
ASUS Turbo Key allows the user to turn the PC power button into an overclocking button. After the easy setup, Turbo Key can boost performances without interrupting ongoing work or games - with just one touch!!

Turbo Key

## ASUS Unique Feature

### ASUS Express Gate

**0 to Internet in Seconds!**
Express Gate™ is an ASUS exclusive OS that provides you with quick access to the Internet and key applications before entering Windows®.

Express Gate

### ASUS TurboV

**Easy, Real-Time O.C. Tunings**
Feel the adrenaline rush of real-time O.C. - now a reality with the ASUS TurboV. This easy O.C. tool allows you to overclock without exiting or rebooting the OS; and its user-friendly interface makes overclock with just a few clicks away. Moreover, the ASUS OC profiles in TurboV provides the best O.C. settings in different scenarios.

TurboV

## ASUS Power Solutions

### ASUS EPU

**System Level Energy Saving**
The new ASUS EPU - the world´s first power saving engine, has been upgraded to a new six engine version, which provides total system power savings by detecting current PC loadings and intelligently moderating power in real-time. With auto phase switching for components (which includes the CPU, VGA card / integrated GPU, memory, chipset, hard drives and CPU cooler / system fans), the EPU automatically provides the most appropriate power usage via intelligent acceleration and overclocking - helping save power and money.

ASUS EPU

### ASUS 4+2 Phase Power Design

Longer Life & Higher Efficiency! Unleashes ultimate memory performances with independent power to core components, while providing fast transient response and stability for the CPU under heavy loading or overclocking modes.

4+2 Phase Power

## ASUS Quiet Thermal Solution

### ASUS Fanless Design - Heatsink solution

The crystal-shaped heatsink features 0-dB thermal solution that offers users a noiseless PC environment. Not only the beautiful shape upgrades the visual enjoyment for motherboard users, but also the heatsink design lowers the temperature of the chipset and power phase area through high efficient heat-exchange. Combined with usability and aesthetics, the ASUS crystal-shaped heatsink will give users an extremely silent and cooling experience with the elegant appearance!

Stylish Heatsink

### Fan Xpert

Active Quiet & Cool ASUS Fan Xpert intelligently allows users to adjust both the CPU and chassis fan speed according to different ambient temperature , which is caused by different climate conditions in different geographic regions and system loading.Built-in variety of useful profiles offer flexible controls of fan speed to achieve a quiet and cool environment.

Fan Xpert

## ASUS Crystal Sound

### 8-channel Audio

**Enjoy high-end sound system on your PC!**
The onboard 8-channel HD audio (High Definition Audio, previously codenamed Azalia) CODEC enables high-quality 192KHz/24-bit audio output, jack-sensing feature, retasking functions and multi-streaming technology.

8 Channel Audio

### Noise Filter

**Eliminate background noise while recording**
This feature detects repetitive and stationary noises like computer fans, air conditioners, and other background noises then eliminates it in the incoming audio stream while recording.

Noise Filter

## ASUS EZ DIY

### EZ-Flash 2

**Simply update BIOS from a USB flash disk before entering the OS**
EZ Flash 2 is a user-friendly BIOS update utility. Simply launch this tool and update BIOS from a USB flash disk before entering the OS. You can update your BIOS only in a few clicks without preparing an additional floppy diskette or using an OS-based flash utility.

### CrashFree BIOS 3

**Simply restore corrupted BIOS data from USB flash disk**
The ASUS CrashFree BIOS 3 allows users to restore corrupted BIOS data from a USB flash disk containing the BIOS file. This utility saves users the cost and hassle of buying a replacement BIOS chip.

### O.C. Profile

**Conveniently store or load multiple BIOS settings**
Freely share and distribute favorite overclocking settings The motherboard features the ASUS O.C. Profile that allows users to conveniently store or load multiple BIOS settings. The BIOS settings can be stored in the CMOS or a separate file, giving users freedom to share and distribute their favorite overclocking settings.

### ASUS Q-Design - Q-DIMM

**DIY quickly, DIY easily!**
ASUS Q-DIMM enhances your DIY experience by speeding up and simplifying the DIY process!

## Industry Standard

### Gigabit Lan support

The on-board LAN controller is a highly integrated GbLAN controller. It is enhanced with an ACPI management function to provide efficient power management for advanced operating systems.

### S/PDIF-out on Back I/O Port

This motherboard provides convenient connectivity to external home theater audio systems via optical S/PDIF-out (SONY-PHILIPS Digital Interface) jacks. It allows to transfer digital audio without converting to analog format and keeps the best signal quality.

## RoHS

### GreenASUS

The motherboard and its packaging comply with the European Union´s Restriction on the use of Hazardous Substances (RoHS). This is in line with the ASUS vision of creating environment-friendly and recyclable products and packaging to safeguard consumers´ health while minimizing the impact on the environment.

# Specifications

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| CPU | Intel® Socket 1156 Core™ i7 Processor/Core™ i5 Processor/Core™ i3 Processor/ Pentium® Processor<br>Supports Intel® Turbo Boost Technology*<br>* The Intel Turbo Boost Technology support depends on the CPU types.<br>** Refer to www.asus.com for Intel CPU support list |
| Chipset | Intel® H55 Express Chipset |
| Memory | 4 x DIMM, Max. 16 GB, DDR3 2133(O.C.)*/1333/1066 Non-ECC,Un-buffered Memory<br>Dual Channel memory architecture<br>Supports Intel® Extreme Memory Profile (XMP)<br>*Hyper DIMM support is subject to the physical characteristics of individual CPUs. Some hyper DIMMs only support one DIMM per channel. Please refer to Memory QVL for details.<br>**Refer to www.asus.com or this user manual for the Memory QVL(Qualified Vendors Lists). |
| Expansion Slots | 1 x PCIe 2.0 x16<br>1 x PCIe 2.0 x1 (2.5GT/s, gray slot)<br>2 x PCI |
| VGA | Multi-VGA output support: HDMI, DVI-D and RGB ports<br>Supports HDMI with max. resolution 1920x 1200 @ 60Hz<br>Supports DVI with max. resolution 1920x 1200 @ 60Hz<br>Supports RGB with max. resolution 2048x 1536 @ 75 Hz |

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| | Maximum shared memory of 1748 MB |
| Storage | **Intel® H55 Express Chipset built-in**<br>6 xSATA 3.0 Gb/s ports<br>**JMicron® JMB368 PATA controller**<br>1 xUltraDMA 133/100 for up to 2 PATA devices |
| Audio | Realtek 8-Channel High Definition Audio CODEC<br>- BD Audio Layer Content Protection<br>- Support Jack-dectection, Multi-streaming,Front Panel Jack-Retasking (Mic in port)<br>- ASUS Noise Filter<br>- Optical S/PDIF out ports at back I/O |
| USB | 12 USB 2.0/1.1 ports (6 ports at mid-board, 6 ports at back panel) |
| ASUS Unique Features | ASUS Exclusive Overclocking Features<br>- GPU Boost<br>- TurboV<br>- Turbo Key<br>ASUS Power Solutions<br>- 4+2 Phase Power Design<br>- ASUS EPU<br>ASUS Express Gate<br>ASUS Quiet Thermal Solution<br>- ASUS Fanless Design: Heat-sink solution<br>- ASUS Fan Xpert<br>ASUS EZ DIY<br>- ASUS Q-DIMM<br>- ASUS O.C. Profile<br>- ASUS CrashFree BIOS 3<br>- ASUS EZ Flash 2<br>- ASUS MyLogo 2<br>- Multi-language BIOS |
| Overclocking Features | **Precision Tweaker**<br>- vCore: Adjustable CPU voltage at 0.00625V increment<br>- vIMC: Adjustable IMC voltage at 0.05V increment<br>- vDRAM Bus: Adjustable DRAM voltage at 0.1V increment<br>- vPCH: Adjustable PCH voltage at 0.05V increment<br>- vCPU_PLL: Adjustable CPU_PLL voltage at 0.05V increment<br>- iGPU: Adjustable iGPU voltage at 0.0125V increment<br>**SFS (Stepless Frequency Selection)**<br>- PCI Express frequency tuning from 100MHz up to 200MHz at 100MHz increment<br>- Internal Base Clock tuning from 80MHz up to 500MHz at 1MHz increment<br>**Overclocking Protection**<br>- ASUS C.P.R.(CPU Parameter Recall) |
| Back Panel I/O Ports | 1 x PS/2 Keyboard (Purple)<br>1 x HDMI Output<br>1 x DVI-D Output<br>1 x D-sub Output<br>1 x Optical S/PDIF Output<br>1 x RJ45 port<br>6 x USB 2.0/1.1 ports<br>8-channel Audio I/O |
| Internal I/O Connectors | 3 x USB connectors support additional 6 USB ports<br>1 x IDE connector<br>1 x CPU Fan connector<br>1 x Power Fan connector<br>1 x Chassis Fan connector (4-pin)<br>6 x SATA 3.0Gb/s connectors<br>1 x S/PDIF Out Header<br>Front panel audio connector<br>1 x COM connector<br>1 x Clear CMOS jumper<br>1 x 24-pin ATX Power connector<br>1 x 8-pin ATX 12V Power connector<br>System Panel |
| BIOS | 64 Mb Flash ROM , SPI, AMI BIOS, PnP, DMI2.0, WfM2.0, SM BIOS 2.5, ACPI 2.0a, Multi-language BIOS, ASUS EZ Flash 2, ASUS CrashFree BIOS 3 |
| Manageability | WfM 2.0,DMI 2.0,WOL by PME,WOR by PME,PXE |

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| Accessories | User's manual<br>1 x I/O Shield<br>1 x UltraDMA 133/100/66 cable<br>2 x SATA cable(s) |
| Support Disc | Drivers<br>Anti-virus software (OEM version)<br>ASUS Update<br>ASUS Utilities |
| Form Factor | uATX Form Factor<br>9.6 inch x 9.6 inch ( 24.5 cm x 24.5 cm ) |